STATE OF TENNESSEE FOR THE CHATTANOOGA EAC
Hamilton County, Meigs County, Marion County

and

STATE OF GEORGIA FOR CHATTANOOGA EAC
Catoosa County and Walker County

COMPLETENESS CHECKLIST FOR EVALUATING CONTROL STRATEGIES

The March 31, 2004 checklists for the Chattanooga and Tennessee EAC area is supplemented with this checklist to reflect the revisions to the control strategy and technical demonstration of attainment.

1. Does the control strategy describe one or more local or state measures that are specific, quantified and permanent, above and beyond what is already required?

Yes: An open burning ban and Stage I Vapor Recovery will be implemented at the state level in the Chattanooga (GA) area in Catoosa and Walker counties. Additionally, Catoosa and Walker counties will pursue local measures such as truck stop electrification projects, school bus conversions and retrofits, and voluntary smog alert programs. In Hamilton, Meigs, and Marion counties and ozone season open burning ban, Stage I Vapor Recovery, anti-idling , transit, ozone action day control and an On-Board Diagnostics vehicle inspection and maintenance program for Hamilton County, Tennessee will be implemented.

2 through 6: All responses for checklist items 2 through 6 are still current as presented in the March 31, 2004 milestone checklists for the states of Georgia and Tennessee for the Chattanooga EAC area.

COMPLETENESS CHECKLIST FOR EVALUATING TECHNICAL ASSESSMENT

1. Are representative episodes modeled that were reflective of a typical ozone season exceedance that meets the EPA episode selection guidance to ensure that representative meteorological regimes are considered?

Yes: Cartesian Regression Tree (CART) analysis used to identify representative regimes. Three regimes were identified for Chattanooga. Two exceedance days that represent two of the three key exceedance meteorological regimes for Chattanooga, with a range of 8-hour ozone exceedance concentrations from 98.1 to 105.5 were modeled. One episode was modeled: August 11-20, 2000. The episode is representative of conditions contributing to 8- hour ozone exceedances..

2. Does the plan include MOBILE6 and NONROAD model data as the basis for the emissions inventory?

3. Is local modeling used to develop the attainment control strategy?

Yes: The 8-hour ozone attainment demonstration for the Chattanooga EAC was, initially, independently developed by the States of Georgia and Tennessee using different modeling systems and inputs for the March 31, 2004 milestone submittal. Both demonstrations represent reasonable and plausible conditions. The Tennessee modeling in the March 31, 2004, submittal was reviewed as the primary modeling for the demonstration. This modeling was based on local or fine grid scale (i.e., horizontal grid spacing of 4 kilometers (km)). The Georgia modeling was submitted for the March 31, 2004 EAC milestone as corroborative or supporting data for the Chattanooga demonstration. It was based on regional modeling using a horizontal grid scale resolution of 12 km.

The revised modeling for the Chattanooga EAC area submitted in June 2004 is based on nested grids of 4/12/36 km and 35 vertical layers were used in the MM5 meteorological model. Nested grids of 4/12/36 km nested grids and 13 vertical layers were used in the CMAQ air quality modeling. The local assessment for the Chattanooga area is now analyzed within a 4 km grid. The revised modeling addresses the steps that should be developed in an attainment demonstration and adhere to draft EPA guidance.

4. Does the plan include documentation of the modeling system (i.e., meteorological, emissions, air quality models, biogenic processor) used in the local demonstration?

Yes: Air quality, meteorological and emissions models used are CMAQ, MM5 and SMOKE (Mobile 6 and NONROAD2002). BEIS3 database used to process biogenic emissions. EGAS4.0 used in developing future emissions.

5. Was the base case model performance evaluation documented and acceptable and consistent with EPA guidance?

Yes: Model performance for the one hour ozone concentrations was submitted and were acceptable. However, more work to improve the model performance is indicated. The model performance for the 8-hr statistics are needed for each EAC area.

6. Was a modeling protocol submitted?

No.

7. Does the modeling demonstrate that all ozone design values are less than 85 ppb?

Yes. In the March 31, 2004 milestone submittal, the Tennessee modeling predicted a 2007 future design value of 85.6 parts per billion (ppb) that does not indicate attainment while the Georgia modeling did predict a 2007 future design value less than 85 ppb. Attainment is indicated when the future design value is less than 85 ppb. The supporting weight of evidence analysis (overall model predicted ozone improvement, meteorological influences, and attainment test sensitivities) that accompanied the March 31, 2004 attainment modeling also was inconclusive to support a

decision that Chattanooga would more than likely attain the NAAQS by 2007. The EPA believed additional control measures would be needed. Additional details on the March 31, 2004 submittal and EPA's review are included in the April 30, 2003 **Federal Register** (69 FR 23858) and on the EAC website at: http://www.epa.gov/ttn/naaqs/ozone/eac/index.htm.. In the June 2004 revised modeling based on the 4 km grid developed by the state of Georgia, the modeled and screening test indicates attainment. Future design values are indicated in the following table.

monitor location	1999-2001 ambient design values	2007 modeled design values
		FDV
Sequoyah	93	81
Chattanooga VAAP	92	81
Meigs Co.	93	81

8. If the modeling does not demonstrate that all design values are less than 85 ppb, was acceptable weight of evidence provided and consistent with EPA guidance that shows the area will attain the 8-hour ozone standard by December 31, 2007?

Yes/No Comment field: A weight of evidence analysis is not needed if the modeled and screening attainment tests are passed.

CONCLUSION: In June 2004, the states of Georgia and Tennessee collectively submitted revised modeling which includes additional local control measures to support the first deferral of the effective designation date for the Chattanooga EAC. area. The modeling is based on a revision to the March 31, 2004 Georgia EAC modeling submitted Chattanooga. EPA believes the technical information submitted is adequate to grant a deferral of the effective designation data. This review does not constitute a decision of approval of the attainment demonstration which will be submitted in December 2004. EPA will perform a more comprehensive review of the Georgia and Tennessee technical analyses before making a decision on the attainment demonstration. Both the March 31, 2004 modeling submitted by Tennessee and the current GA modeling address the steps that should be developed in an attainment demonstration and adhere to draft EPA guidance. However, the conclusions from these submittals do not totally agree. The TN modeling does not indicate attainment but suggests that additional controls are needed. Additional controls have been identified and were modeled in the June 2004 state of GA modeling. Additional information in needed as mentioned above to complete the technical demonstration.

****

DOES THE EARLY ACTION COMPACT PLAN MEET THE MARCH 31, 2004

MILESTONE?

Yes - Hamilton County and Meigs County, Tennessee, and Catoosa County, Georgia have met the March 31, 2004 milestone to qualify for a deferral, to September 30, 2005, of the effective date of nonattainment designation for the 8-hour ozone standard. Marion County, TN and Walker County, GA are designated attainment, effective June 15, 2004.
****